EDUC 533: Week 1 – Assignment:Instructional Model Comparison

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*Abstract*

The use of instructional design and instructional strategy models are the foundations of curriculum design. There are multiple models of each to choose from when designing curriculum. The challenge is finding the model or models that best suit the needs of the learners’ subscribing to the curriculum being presented. Instructional design and instructional strategy co-exist in a curriculum. The main difference, which was discussed in class, is that instructional strategies are embedded within the instructional design. This paper will briefly cover two instructional design models as well as two instructional strategy models, along with comparison graphics of each category of models.

*Instructional Design Models*

Two instructional models that will be compared in this paper are the Dick and Carey Instructional Design Model, along with the Understanding by Design model.

According to the website, www.instructionaldesign.org, the Dick and Carey model, developed by Walter Dick and Lou Carey, is divided up into nine different stages which are:

1. Identify Instructional Goals.
2. Conduct Instructional Analysis.
3. Indentify Entry Behaviors and Learner Characteristics.
4. Write Performance Objectives.
5. Develop Criterion-Referenced Test Items.
6. Develop Instructional Strategy.
7. Develop and Select Instructional Materials.
8. Develop and Conduct Formative Evaluation.
9. Develop and Conduct Summative Evaluation. (Culatta)

It is also worthwhile to note that the Dick and Carey model, “components are executed iteratively and in parallel rather than linearly.” (Wikipedia.org). Simply speaking, the model is not meant to be followed in a “straight line” sort of fashion, but more of a revolving and revision process. Notice that stage 6 states to develop an instructional *strategy*, which re-enforces the concept of strategy embedding in instructional design mentioned earlier in this paper.

The Understanding by Design (UbD for short) model, developed by Grant Wiggins and Jay McTighe, is similar to the Dick and Carey model by way of indentifying instructional goals. Once that is accomplished, the UbD model takes on a “work backwards” approach in developing instruction (Instructional Design Intensive). The three stages are as follows:

1. Identify Desired Outcomes and Results.
2. Determine what constitutes acceptable evidence of competency in the outcomes and results, or assessment.
3. Plan instructional strategies and learning experiences that bring students to these competency levels.

Again, the embedding of instructional strategies can be seen in stage 3 of the UbD model. In addition to these three stages, the UbD model emphasizes the “six facets of understanding,” which are; explaining, interpreting, applying, having perspective, empathizing, and having self-knowledge (Instructional Design Intensive).

*Instructional Design Model Comparison*

Each model is compared using these guidelines: Analysis, Design, Development, Implementation, and Evaluation, or “ADDIE,” for acronym purposes. The ADDIE model “represents a dynamic, flexible guideline for building effective training and performance support tools” (Wikipedia.org). A brief description of each element of “ADDIE”:

1. Analysis – Instructional goals, learners, content delivery, etc. are established.
2. Design – Learning objectives, assessment, lesson planning.
3. Development – Creation, review and revision of design.
4. Implementation – Field testing.
5. Evaluation – Formative and Summative assessments. (Wikipedia.org)

The following is a comparative graphic for the two instructional designed models mentioned:

|  |  |  |
| --- | --- | --- |
| M  O  D  E  L | Dick and Carey | Understanding by Design |
| A | After instructional goals are defined, instructional and behavior analysis are performed. | Identify learning goals, understanding or misunderstanding of concepts. |
| D | Develop criterion referenced tests. | Plan evaluation or evidence of learning. |
| D | Develop instructional strategies and materials. | Create, review and revise learning activities and strategies. |
| I | Implement strategies and materials. | Implement plan. |
| E | Design and conduct formative and summative evaluations. | Determine if evaluation results were met. |

*Instructional Strategy Models*

Problem Based Learning (PBL) and Anchored Instruction are both fundamentally similar in regard to the student having more direct control of their learning. Both learning models present the students with a real-world problem that they must collaborate, research, and design a solution or solutions to the problem.

In Problem Based Learning, “students actively resolve complex problems in realistic situations” (Glazer). Other skills that PBL incorporates are “consensual decision making, dialogue and discussion, team maintenance, conflict management, and team leadership” (Glazer) amongst students. PBL is not merely a way for students to practice problem solving skills, but more of a means of gaining better understanding of a content area (i.e. Science, Math, or integrating multi-content areas). Students are expected to “own the problem, either by creating or selecting it” (Glazer). This may lead to students creating multiple methods to come up with a solution to the problem by means of researching, organizing and interpreting information that is gathered. This information may come from multiple sources, including the internet. The teacher’s role is that of a facilitator, or a coach per say. Offering guidance to students and “continually question students about the concepts they are learning in the context of the problem in order to probe their understanding, challenge their thinking, and help them deepen or extend their ideas” (Glazer).

Anchored Instruction utilizes the same principals as Problem Based Learning with the exception of the problem, or “anchor.” The anchor can be in the form of “a story, adventure, or situation that includes a problem or issue to be resolved and that is of interest to the students” (Glazer). Students also “explore related content presented in the anchor to deepen their understanding of the concepts and to connect their knowledge to other disciplines” (Glazer).

The teacher’s role, initially, is one that provides strong guidance to the students in acquiring the concepts the anchor provides. As the story progresses, the students are given more independence to gather information needed to solve the problem. Students are able to use a variety of sources, including the internet, in the information gathering process. When finished, students have the opportunity to share their information. This “allows students to make contributions to the learning community by sharing the strategies used to resolve the overall problem” (Glazer). A way of enhancing the overall learning experience, the students might “read more about the subject area, explore a related story, engage in a related simulation, create a project, or design a web site” (Glazer).

These learning methods break away from the traditional, didactic instructional method and provide students with the tools to take responsibility for their own learning. They are two of multiple strategies that can be embedded in the overall instructional design process.

*Instructional Strategy Comparison*

The following is a graphical comparison of the two learning strategy models mentioned. There are four specific criteria that each is evaluated on; relative “student centerdness,” assessment, 21st century fluencies, and engagement:

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| --- | --- | --- |
| Strategy Model | Problem Based Learning | Anchored Instruction |
| Relative "student centeredness" | The students are primarily responsible for their learning with some direction or "cognitive coaching" from the teacher. | The students are primarily responsible for their learning, but with more direction or "anchoredness" from the teacher and/or curriculum materials. |
| Assessment | Student involvement, the overall solution to the problem, skills used to solve the problem, critique from peers. | Student involvement, the overall solution to the problem, skills used to solve the problem, critique from peers**.** |
| 21st Century Fluencies | The use of the internet for additional research is recommended. Other tools such as word processing, spreadsheet, and presentation software may be used. | The use of the internet for additional research is recommended. The "anchor" may be in the form of a video game or other multimedia activity**.** |
| Engagement | The problem must be one that students can share a common interest in, which will lead to higher levels of student engagement. | The "anchor" should be in a context that students can relate to and show interest in, thus creating higher levels of student engagement. |

*Conclusion*

The use of these or any other type of instructional design model, along with the embedding of instructional strategies, are useful in improving student’s learning. They also provide a foundation for instructors that will greatly improve the chance for success in teaching their respective fields.

References

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Images

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